UNIVERSAL BRACKET

BACKGROUND OF THE INVENTION

The subject invention relates to a universal bracket for securing between stud partitions, timberwork or the like for the installation of equipment, fixtures and fittings, plasterboard and similar components or materials.

When, for example, connection boxes for concealed wiring, so-called recessed boxes, are to be mounted behind plasterboard or a panelled ceiling, the installation engineer will often resort to the use of pieces of board or the like that are placed between the studs or beams and are used as a "nailing strip" in order to secure the box. This is time-consuming and by no means an effective method.

Plaster walls and walls of some other materials have a limited and inadequate load-bearing capacity for reliable attachment when fairly heavy articles such as, for instance, kitchen units and/or bathroom fittings are to be mounted directly on the wall without being secured to load-bearing structures. In such cases, more provisional solutions such as pieces of board or the like are used to spread the load. Direct attachment to the plaster wall alone will at best only provide a highly temporary "solution" which in all probability will result in problems at a subsequent point in time.

Plaster walls are generally constructed using standard 240 cm high boards mounted on a stud partition of steel sections. When the wall is to be higher than the standard height, the boards must be lengthened in height. Today, this is usually done using of steel bands. However, a single steel band has little torsional rigidity, and moreover screws or nails or similar fasteners may well result in unsightly bulges in the wall surface.

As stated above, there exists a clear need for fastening/connecting devices that can be used in connection with plaster walls and similar walls, which solve the problems and remedy the deficiencies of the prior art.

The object of the present invention is to alleviate the shortcomings of the prior art.

SUMMARY OF THE INVENTION

This object above is achieved with a universal bracket of the type mentioned in the introduction comprising two elongate elements having substantially the same profile, made of a sheet material in such manner that each of said elements has a relatively broad central part which is defined by longitudinally flanged edge portions, and wherein at the opposite free ends of said respective elements there is provided an end piece, said two elements being dimensioned and adapted so that they fit into each other and can be displaced in the longitudinal direction, thus providing a telescopically adjustable "beam" that is torsion-proof and can readily be adapted to the width between wooden or steel studs, steel frames or timberwork and can easily be fastened thereto by fasteners provided in said end pieces.

In one embodiment of the invention is the flanging of said edge portions provided in that said respective central part of said sheet material are bent inwards at the edge as as a first outward-projecting portion that forms a substantial right angle with the surface plane of said central part, which first portion passes into a second portion that is substantially parallel to said surface plane

In another embodiment of the invention is said end piece provided with a suitably dimensioned upward bend of said sheet material of said elements.

In still another embodiment of the invention are said end pieces and/or said central parts of the elements there provided relatively small holes for fastening means, for example, screws.

In still another embodiment of the invention , are said end pieces and/or said central parts of said elements provided with holes or cut-outs adapted to receive preferably flexible electrical tubing, optionally for connections/feedthroughs etc.

In still another embodiment of the invention is said bracket so dimensioned that it has a longitudinal displacement from about 480 mm to about 600 mm.

In still another embodiment of the invention have said elements a different thickness. said elements have a different thickness.

In still another embodiment of the invention have said elements a different length.

In still another embodiment of the invention has the longest of said elements a thickness of about 0.7 mm, and the shortest of said elements a thickness of about 0.9 mm.

In still another embodiment of the invention is said sheet material galvanised steel or a material with similar properties.

BRIEF DESCRIPTION OF THE DRAWINGS

The advantages and features of the disclosed invention will readily be appreciated by persons skilled in the art from the following detailed description when read in conjunction with the drawing, wherein:

Figs. 1 and 2 are side views of two exemplary embodiments of the bracket according to the invention; and

Figs. 3 and 4 are sectional views of the bracket and end piece taken along the lines A-A and B-B in Fig. 1 respectively.

The bracket according to the invention consists of two elongate elements 1 and 2 having substantially the same profile, made of a sheet material in such manner that each element 1 and 2 has a relatively broad central part, 3 and 4 respectively, which is defined by longitudinally flanged edge portions 6. The flanging of the edge portions 6 is provided in that the respective central parts 3 and 4 of the sheet material are bent inwards at the edge areas as a first outward-projecting portion that forms a substantial right angle with the surface plane of the central part 3, 4, which first portion passes into a second portion that is substantially parallel to the said surface plane, as can be seen clearly from Figs. 2 and 3. An end piece 5 is provided at the opposite free ends of the respective elements 1 and 2. This end piece 5 may, for example, consist of a suitably dimensioned upward bend of the sheet material. The two elements 1 and 2 are dimensioned and adapted so that they fit into each other and can be displaced in the longitudinal direction. In this way, a telescopically adjustable "beam" is obtained that is torsion-proof and can readily be adapted to the width between wooden or steel studs, steel frames or timberwork and can by means of screws or other suitable fasteners provided in the end pieces 5 easily be fastened thereto. Screws holes, indicated by the reference numeral 7, are provided for such fastening.

Screw holes 7 may also be provided in the respective central parts 3 and 4 for installation boxes and/or other equipment or material that is to be installed. In both the end pieces 5 and the central parts 3 and 4 there may also be provided larger holes 8 adapted to flexible electrical tubing for connection/feedthrough etc. The elements 1 and 2 may be of different lengths and thickness. At the end pieces 5, a cut-out 9 may be provided in the bent portions 6, as indicated in Fig. 2. The cut-out has a width equivalent to the flange width of a steel stud and is adapted to receive such a stud or the like.

As a concrete example of the dimensions and materials selection for an embodiment of the universal bracket according to the invention, the bracket had a longitudinal displacement from 480 mm to 600 mm and more. It was made of galvanised steel having a thickness of 0.7 mm in the longest element 1 and 0.9 mm in the shortest element 2, which may also be used as an independent bracket. Both elements were provided with 3 mm holes spaced 114 mm apart for the attachment of ceiling boxes. The longest element 1 was also provided with four 25 mm holes for the feedthrough of flexitubing. Each end piece 5 was provided as a 35 mm upward bend with two 5 mm holes for attachment to timberwork. The bracket according to the invention is not limited to the said materials selection and embodiments as the patent protection is defined by the following patent claims which must also be interpreted as comprising all relevant equivalents.